

FIG. 1

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Title: A METHOD FOR ANALYZING MATERIAL DENSITY VARIATIONS ON A MULTI-LAYER PRINTED CIRCUIT BOARD

Express Mail Label No.: EV 311271991 US

Filing Date: June 27, 2003

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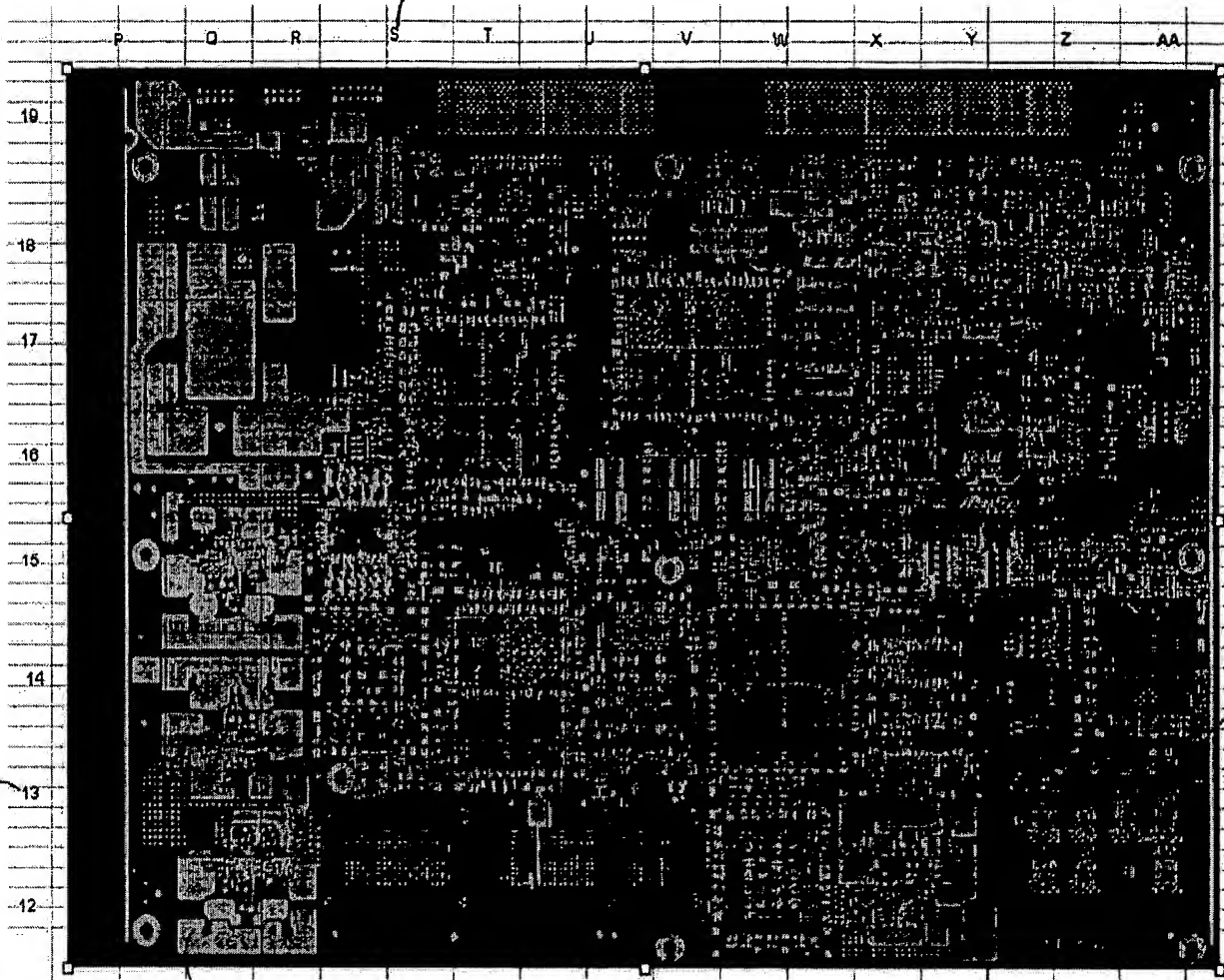


FIG. 2

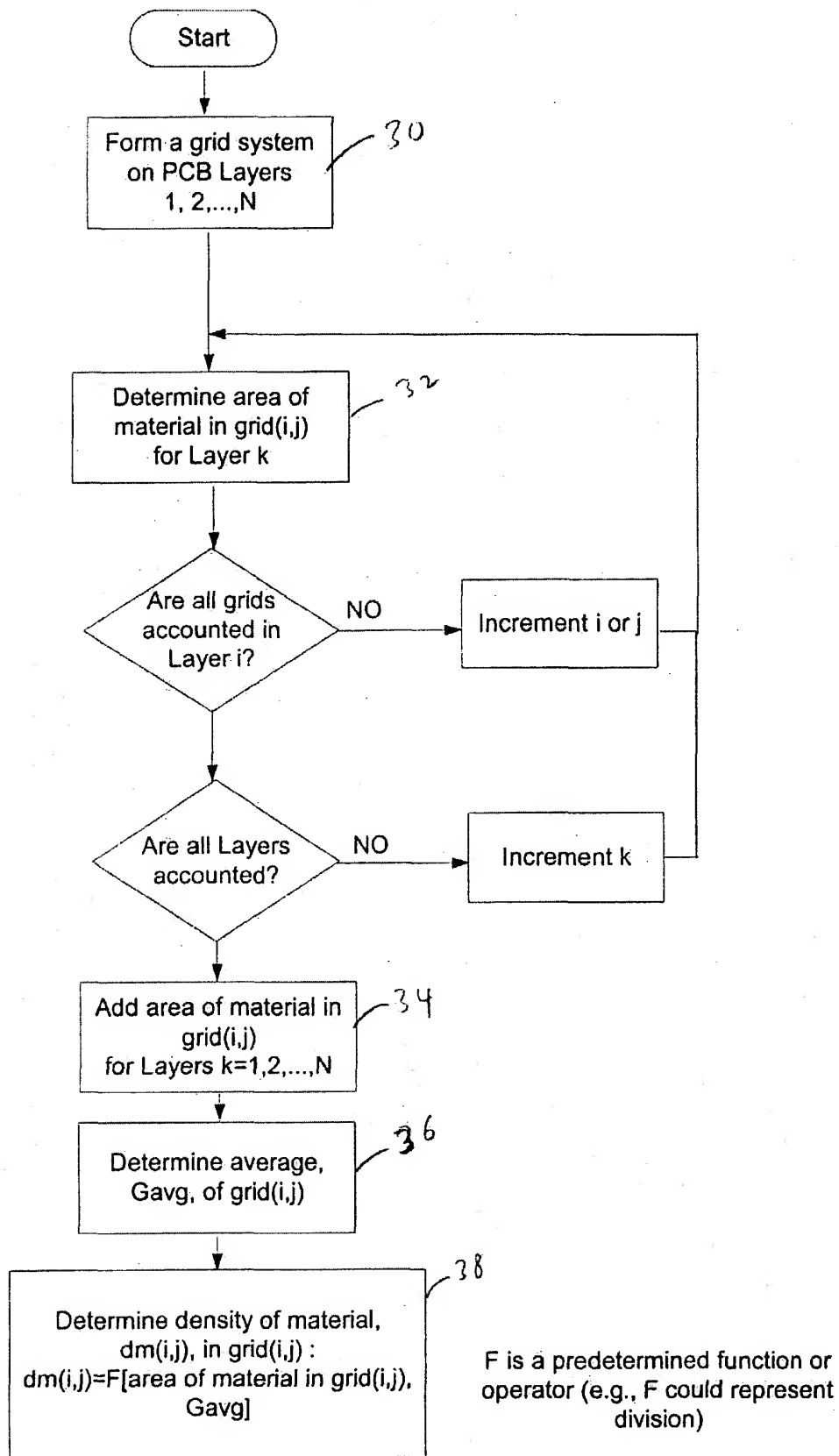
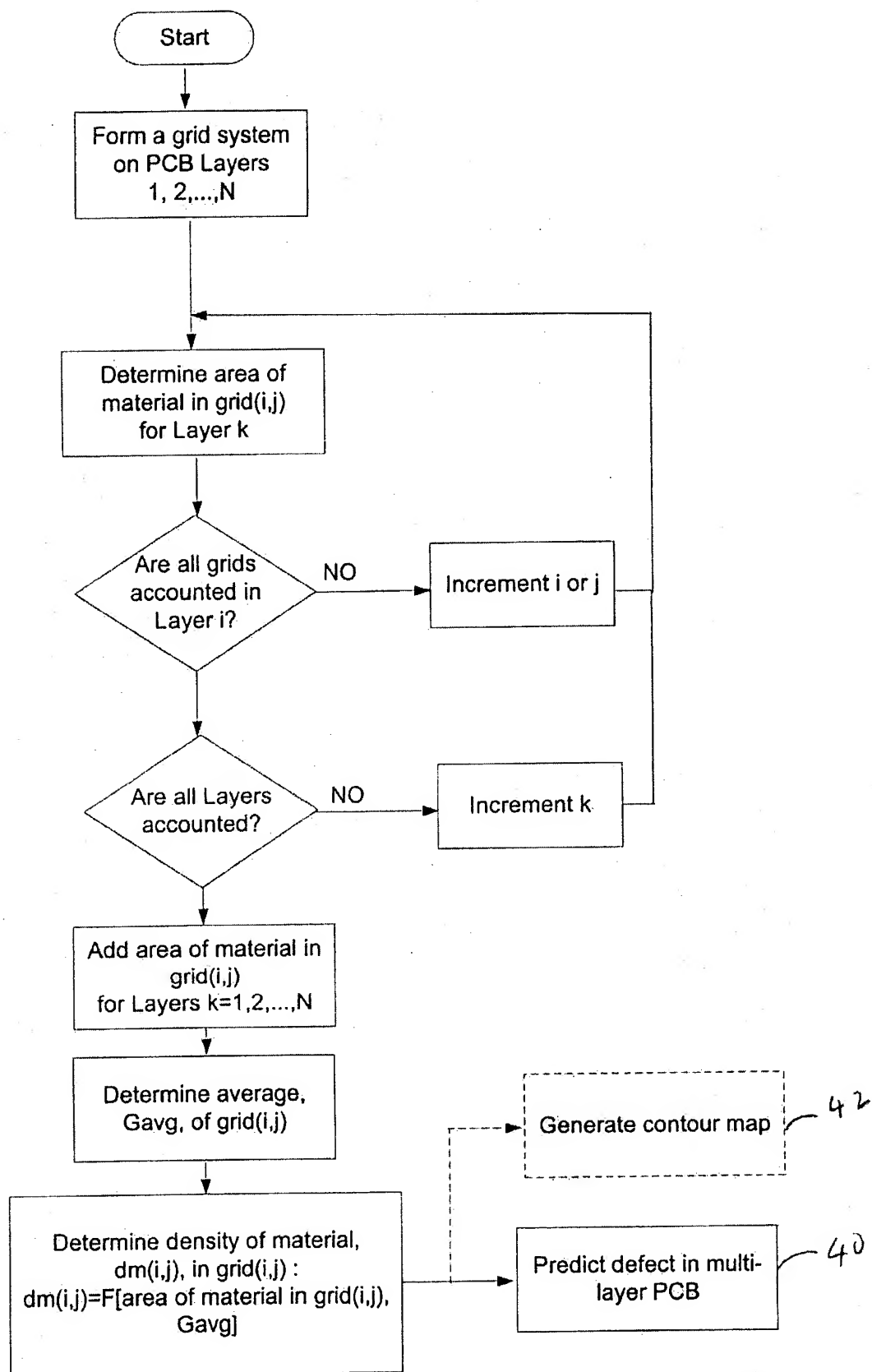
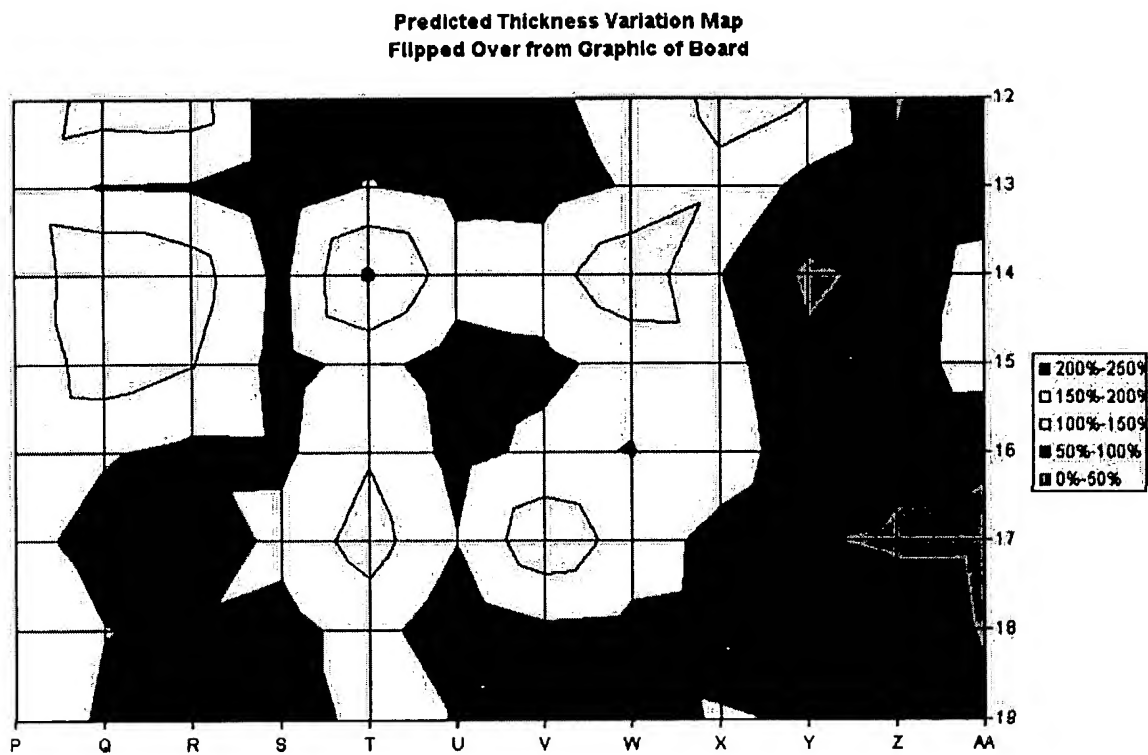


FIG. 3



F is a predetermined function or operator (e.g., F could represent division)

FIG. 4



**FIG. 5**

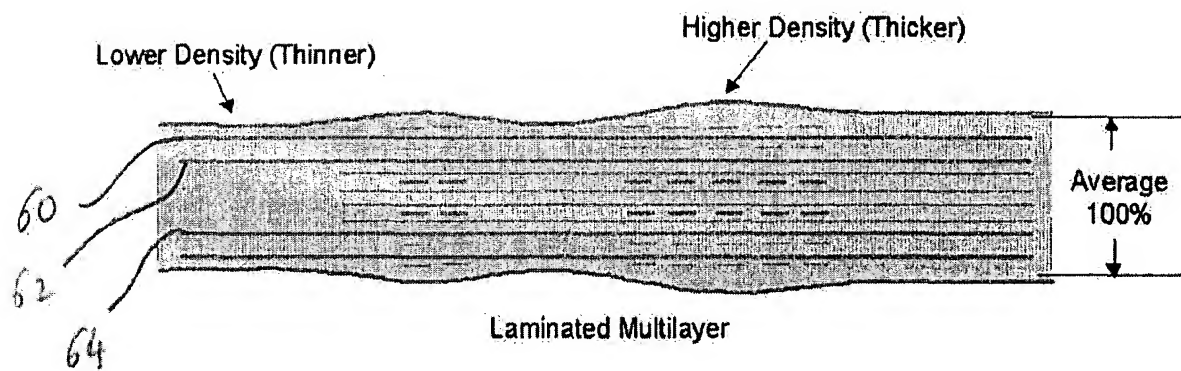


FIG. 6

**Copper/Exposed Measurement Popup**

Drill Size: 0.05h

Drill Size:

Area:

Area:

Area:

Area:

**Copper Distribution Report**

Job: 1  
 Step: 1  
 Layer: 105h  
 Drill: 0.05h  
 Thickness: 0  
 Resolution: 1 Mill

Total copper: 40.223 sq/in  
 Percentage: 17

**Copper Distribution Report (Area + Percent)**

X Min	X Max	Y Min	Y Max	Area	Percent
0.031	4.081	4.693	19.966%	10.146%	11.669%
4.940	4.693	3.542	12.281%	11.169%	8.805%
3.405	3.524	3.515	8.464%	8.761%	8.738%

FIG. 7

FIG. 8



	P	Q	R	S	T	U	V	W	X	Y	Z	AA
19	135%	92%	81%	63%	121%	97%	46%	81%	104%	98%	57%	53%
18	136%	101%	94%	81%	122%	62%	92%	86%	78%	67%	60%	48%
17	114%	84%	63%	115%	172%	102%	188%	129%	82%	51%	47%	47%
16	100%	104%	88%	89%	146%	85%	111%	88%	132%	66%	55%	52%
15	107%	179%	153%	83%	116%	76%	88%	117%	121%	68%	76%	125%
14	103%	199%	175%	87%	207%	125%	128%	187%	102%	42%	61%	122%
13	115%	97%	86%	65%	103%	84%	79%	104%	140%	85%	53%	63%
12	108%	176%	180%	64%	69%	68%	94%	111%	163%	152%	48%	71%

FIG. 9